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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
08/833,620	04/07/97	DOBBINS	1527578610 (D)

IM31/0309

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EXAMINER	
HOFFMANN, J	
ART UNIT	PAPER NUMBER
1731	11

DATE MAILED: 03/09/99

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

### OFFICE ACTION SUMMARY

- ☒ Responsive to communication(s) filed on 2-3-99
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

- ☒ Claim(s) 1, 4-23 & 26-32 is/are pending in the application.
- Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☒ Claim(s) 13-16 is/are allowed.
- ☒ Claim(s) 4, 4-11, 17-21, 23 & 26-32 is/are rejected.
- ☒ Claim(s) 12 & 22 is/are objected to.
- ☒ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 7 5 sheets
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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### DETAILED ACTION

Due to Office's mishandling of papers, the application was not actually abandoned. The Notice of Abandonment of 28 October 1998 should be disregarded.

### *Claim Rejections - 35 USC § 112*

Claims 28-29 and 31-32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for indicating that "deposition efficiency" should be "defined as a function of grams of SiO<sub>2</sub> produced at the combustion chamber". The term "defined" connotes that Applicant desires to be his own lexicographer. However it is generally only appropriate to define terms when the application is originally filed - not during the middle of prosecution. Moreover, the deposition efficiency is defined as the efficiency at which deposition occurs. The fact that the deposition might be estimated by knowing the amount of glass produced, does not equate to a definition. Mathematically speaking, it is not a function because a function requires at most one ordinate value for each abscissa value; Applicant's figure 4 shows multiple efficiency for most abscissa values.

Lastly, the straight lines of fig. 4 are confusing because it predicts that at a deposition of 10,000 grams would correspond to a deposition rate of about 200% - this is impossible. Given

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the spread of data - and no statistical analysis of the data is mentioned - there is no basis to conclude that the straight lines would be the appropriate function.

Claims 23 and 1 require that no halide-containing vapors are produced, yet claim 28 and 31 require the use of silicon tetrachloride which inherently results in halide-containing vapors.

Claims 28-29 and 31-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "that achieved when silicon tetrachloride is utilized"; it is unclear if it refers to efficiencies achieved with methods known at the time of invention, methods known at time of filing, methods known at the time of issue of the parent or reissue, or some other efficiency. Even if they were to use the same set up, is the temperatures identical - or are they the optimal for each particular gas? Are the gas flow rates based on moles/minute or cc/min.

The claims define the efficiency to be a function, but there is no indication what the function is or how to determine it. Although figure 4 shows such a function, it is assumed that Applicant does not want the claim to be limited to that specific embodiment - but beyond that one of ordinary skill would have no idea as to what is covered by "function" as presently claimed. It is unfair not to reasonably notify the public as to what is meant by the term.

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***Claim Rejections - 35 USC § 103***

Claims 7-8, 11, 17-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter US 3823995 in view of Kratel GB 2049641.

To one of ordinary skill, Carpenter teaches discloses the claimed invention: see the paragraph spanning cols 7-8. However Carpenter does not teach the claimed siloxane. Ti is a IVB metal. Kratel teaches a method of making silica which is "suitable for all applications..." (page 3, lines 14-16); hexamethyldisiloxane is used as the silicon containing compound. A reading of col, 1, lines 15-20 in conjunction with the rest of Kratel teaches the notion that it is "often advantageous" to use the other compounds - rather than the carpenter carbon tetrachloride.

It would have been obvious to substitute the Carpenter reactant (hexamethyldisiloxane) with the Kratel reactant because it is there mere substitution for one known reactant for another one that is "often advantageous." '145 is cited to indicate that there is a reasonable expectation of success - it is clear that one can create cylindrical bodies like the type used to make optical fibers.

Claims 8, 11, 17, 18, and 21 are clearly met

Claims 1, 23 and 27-32 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's supplied translation of Kawaguchi JP 138145 (hereinafter referred to as '145) in view of Schwarz EP 38900.

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'145 discloses the invention as claimed except that '145 does not mention a cyclosiloxane (Applicant essentially admits to this in the Declaration). However, '145 teaches using "a siloxane such as hexamethyldisiloxane..." Schwarz discloses that the instantly claimed cyclosiloxane can be used instead of the disiloxane of '145 to make silica soot. It would have been obvious to use any known siloxane that meets the '145 requirements listed at page 6, lines 20-24. Schwarz teaches the claimed cyclosiloxane is known - it would have been prima facie obvious to use a known siloxane in the '145 invention because '145 clearly teaches to use a subset of all siloxanes.

Claims 4, 26-27 and 30 are clearly met.

As to claims 5-6, '145 mentions on page 6 that a mix of the silane gas and oxygen is used. It is not stated if other gases are used. the examples of Schwarz uses an oxygen containing gas - air. It would have been obvious to use air as the source for the '145 oxygen because it is the cheapest source of oxygen. It is noted that air has the claimed inert gas - nitrogen.

As to claims 28-29 and 31-32, it is the Office's position that such claim limitations are an inherent result of the process. If Applicant argues that the instant results were a result of something special within the process, such might be used as an admission that the claims fail to include a critical feature or that the invention is not enabled if the "something special" is not disclosed in the specification. Alternative, the claims are very broad and give no indication as to which particular efficiency is "that achieved when silicon tetrachloride is utilized...."; since the Office is to give the broadest reasonable interpretation to the claims, it is deemed that the

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efficiency is open to the most non-optimal settings for a silicon tetrachloride embodiment - such as running the process very cold or very hot.

Claims 7, 9-10, 17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of Carpenter, '145 and Schwarz.

Referring as to how the references are applied above, this combination is used to address the use of the cyclo-siloxane in the making of a fiber of claims 9-10 and 19-20. Carpenter teaches everything except the particular siloxane -rather silicon tetrachloride is used. '145 teaches that a particular group of siloxanes can be used instead of silicon tetrachloride when making high-purity silica optical glass bodies; a group that is open to the claimed cyclo-siloxane. But '145 makes no mention of any cyclo-siloxane. Schwarz teaches that the claimed cyclo-siloxane can be used in place of the specific hexamethyldisiloxane in making silica soot. It would have been prima facie obvious to use the Schwarz precursor in the Carpenter invention because such is the mere substitution of one known silica precursor for another known silica precursor.

Claim 7 it seems that the last line should read "...high purity fused..."

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*Allowable Subject Matter*

Claims 12 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-16 are allowed.

*Conclusion*

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 3 February 1999 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(I). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



# REQUESTS FOR INTERVIEW

To make personal and telephone interviews more efficient, it is suggested that Applicant fax answers to the question below (when desiring an interview); it should be forwarded to Examiner Hoffmann within 24 hours. This suggestion is an expedient; Applicant is in no way required to fax in answers to request an interview. Regardless of the manner of the request, Applicant is expected to provide all of the information requested below - at the time of the request. Most interviews are held to the 30 minute time limit.

- 1) Does Applicant's representative have Power of Attorney (MPEP 713.05)?
- 2) Does Applicant's representative have authority to bind the principal concerned (MPEP 713.05, 713.03)? (i.e. Does Applicant's representative have authority to make any and all changes?)
- 3) Who will participate in the interview? Who is the primary contact person?
- 4) Is it a personal or a telephone interview that is requested?
- 5) What is the Application number?
- 6) What days/times work best for you?
- 7) To finalize the date and time, do you prefer to have Examiner call you or your assistant, or do you prefer to contact Examiner (703-308-0469)? Phone #?
- 8) What is the intended purpose(s) of the requested interview? MPEP 713.09, 713.01 (the more specific, the more prepared we'll be)
- 9) What is the intended content of the requested interview? MPEP 713.09, 713.01 (What specific issues are you likely to address?)

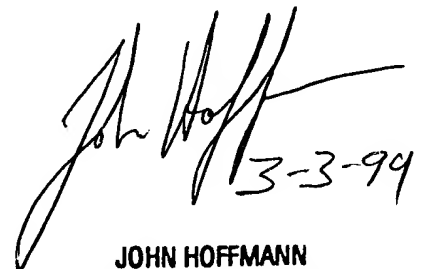
Any inquiry concerning this communication or earlier communications from an examiner should be directed to John Hoffmann whose telephone number is (703) 308-0469.

The fax phone number for OFFICIAL responses after a final rejection is (703) 305-3599.

The fax number for OFFICIAL responses that are not after final rejection is (703) 305-7718.

The fax number to be used during negotiation is (703) 305-3599. UNOFFICIAL faxes can be sent to (703) 305-7115.

Any inquiry of a general nature relating to the status of this application on proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0651

A handwritten signature in black ink, appearing to read "John Hoffmann", with the date "3-3-94" written below it.

JOHN HOFFMANN  
PRIMARY EXAMINER